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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,984	03/29/2001	Jong-ki Han	1293.1192	3707

21171 7590 10/17/2005

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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TUCKER, WESLEY J

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/819,984	HAN, JONG-KI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Wes Tucker	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-10 and 12-30 is/are allowed.
- 6) ☒ Claim(s) 1 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Amendments and Arguments*

1. Applicant's response to the last Office Action, filed May 31, 2005, has been entered and made of record.
2. Applicant has amended claims 1 and 11. Claims 1-30 are pending.
3. Applicant's arguments have been fully considered and are not persuasive for at least the following reasons:
4. With regard to the rejection of claims 1 and 11 under 35 U.S.C. 102(e), Applicant argues that the reference of U.S. Patent 6,272,261 to Matsuoka does not disclose the limitations of claims 1 and 11. Applicant's arguments are based on the fact that Matsuoka discloses further dividing the image once it has already been divided into sub-blocks and using the further divided image to calculate parameters for cubic convolution. Applicant has amended the claims 1 and 11 to include the limitation of "once divided subblocks" in order to distinguish claims 1 and 11 from the reference of Matsuoka. However Examiner points out that the configuration of Matsuoka's invention still reads on the newly amended claims 1 and 11. Matsuoka only divides the original image data into a plurality of subblocks once. The data of the subblocks is then converted to a frequency domain and certain frequencies are grouped in order to determine the interpolation coefficients. However as interpreted the reference of Matsuoka still reads

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on the limitations as claimed because Matsuoka disclose dividing the image into subblocks only once. Further the interpolation coefficients of Matsuoka are still considered to be determined "in units of the once divided subblocks." The frequency grouping and division is interpreted as a sub-step performed on the once divided subblocks. Therefore the reference of Matsuoka is interpreted to read on the language of the claims as written and as amended and the rejection of claims 1 and 11 are maintained.

5. Claims 2-9, and 12-30 were previously indicated as allowable.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,272,261 to Matsuoka.

8. With regard to claim 1, Matsuoka discloses a cubic convolution interpolating apparatus comprising and image signal divider dividing an image signal into a plurality

of subblocks once as original image data (Fig.1, element 1), and a generating unit generating parameters which determine cubic convolution interpolation coefficients in units of the once divided subblocks, and performing cubic convolution interpolation on the original image data that is transmitted from the image signal divider (column 2, lines 23-30, column 8, lines 45-50). The parameters or image feature quantities take the form of frequency-converted coefficients and are extracted from the frequency conversion or generating unit. These image feature coefficients are then used to calculate the interpolation coefficients by calculating the mean coefficients, which are used in selecting the interpolation to be executed (Fig.1, elements 1-5). A filter using cubic convolution interpolation is provided (column 8, lines 45-50).

9. With regard to claim 11, the discussion of claim 1 applies. Matsuoka discloses the method of claim 11 with regard to the apparatus of claim 1.

### ***Allowable Subject Matter***

10. Claims 2-10 and 12-30 are allowed.

### ***Conclusion***

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11. Applicant's amendment necessitated the new grounds of rejection presented in the Office Action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker

10-12-05



**VIKKRAM BALI**  
**PRIMARY EXAMINER**